

What is claimed is:

1. An N-way RF divider comprising:
a body extending along a longitudinal axis and having first and second ends;
a first transmission line extending between the first and second ends of the body;
N second transmission lines extending between the first and second ends of the body; and
an electrical connection between a first end of the first transmission line and a first end of each of the second transmission lines.
2. The N-way RF divider of claim 1, of which the electrical connection includes a conductor extending from a first end of the first transmission line to a first end of each of the second transmission lines, and the length of the first transmission line is equal to the combined length of a second transmission line and the associated conductor.
3. The N-way RF divider of claim 1, of which the first transmission line is longer than each of the N second transmission lines.
4. The N-way RF divider of claim 3, of which a first end of the first transmission line is coplanar with a first end of each of the second transmission lines, and a second end of the first transmission line extends beyond a second end of each of the second transmission lines.

5. The N-way RF divider of claim 1, further including a plate mounted on the second end of the body, and a plurality of resistive paths mounted on the plate, the resistive paths interconnecting each pair of second ends of the second transmission lines.

6. The N-way RF divider of claim 1, of which the body is electrically conductive and forms a conductor of each of the first and second transmission lines.

7. An N-way RF divider comprising:
a first connection;
N second connections;
a planar conductive pattern;
a first signal path between the first connection and the planar conductive pattern, the first signal path being orthogonal to the plane of the conductive pattern;
N second signal paths between the conductive pattern and respective second connections, each second signal path extending orthogonally to the plane of the conductive pattern; and
N resistors lying in a plane parallel to the plane of the conductive pattern, each resistor being connected between two of said second connections.

8. The N-way RF divider of claim 7, of which the conductive pattern has a common node and N equiangularly spaced arms of equal length extending radially from the common node to end portions, and the length of the first signal path is equal to the combined length of a second signal path and the associated arm.

9. The N-way RF divider of claim 7, further comprising a body, and the first signal path extends between opposite ends of the body, and a portion of each of the second signal paths passes through the body.

10. The N-way RF divider of claim 9, of which the length of the first signal path in the body is longer than the lengths of the second signal paths in the body.

11. The N-way RF divider of claim 8, of which a first end of the first signal path is coplanar with a first end of each of the second signal paths, and a second end of the first signal path extends beyond a second end of each of the second signal paths.

12. The N-way RF divider of claim 7, further including a plate mounted on the second end of the body and a plurality of resistive paths mounted on the plate, the resistive paths interconnecting each pair of second ends of the second signal path.

13. An N-way RF divider comprising:

an electrically conductive, cylindrical body extending along a longitudinal axis and having first and second body ends, an axial extension and an annular face recessed from the extension on the first body end, and a planar face on the second body end, a first bore extending coaxially along the longitudinal axis between the first and second body ends, the first bore extending through at least a portion of the extension, and N second bores extending parallel to and spaced from the first bore, the second bores being equally circumferentially distributed about the longitudinal axis;

a first signal conductor supported centrally in and extending through the first bore, the first bore and first signal conductor forming a first transmission line extending between the first and second ends of the body;

N second signal conductors, one second signal conductor supported in and extending through each of the second bores from a first end positioned at the first body end and a second end positioned at the second body end, the second bores and second signal conductors forming N second transmission lines extending between the first and second ends of the body;

a planar conductive pattern orthogonal to the longitudinal axis and mounted on the planar face of the second body end, having a common node connected to an end of the first signal conductor, and N equiangularly spaced arms of equal length extending radially from the common node to respective end portions, each end portion being connected to a respective first end of the N second signal conductors; and

N resistors mounted in a planar configuration on the annular face of the first body end in a plane parallel to the plane of the conductive pattern, the resistors being connected to respective second ends of the N second signal conductors in a configuration forming a resistive path between each pair of second ends of the N second signal conductors.